

REMARKS/ARGUMENTS

In view of the foregoing amendments and the following remarks, the applicants respectfully submit that the pending claims are not anticipated under 35 U.S.C. § 102 and are not rendered obvious under 35 U.S.C. § 103. Accordingly, it is believed that this application is in condition for allowance. If, however, the Examiner believes that there are any unresolved issues, or believes that some or all of the claims are not in condition for allowance, the applicants respectfully request that the Examiner contact the undersigned to schedule a telephone Examiner Interview before any further actions on the merits.

The applicants will now address each of the issues raised in the outstanding Office Action.

Objections

Drawings

The drawings stand objected under 37 C.F.R. § 1.121(d). Specifically, Figures 1-7C and 31 were found to include illegible text. The applicants respectfully note that each of these Figures was included in a submission, responsive to a Notice to File Corrected Application Papers, filed on August 6, 2001. The drawings in that submission were formal and had clear text. Accordingly, it is believed that this objection should be withdrawn.

The drawings also stand objected to as failing to comply with 37 C.F.R. § 1.84 (p) (5) because the Examiner contends that Figure 35 is mentioned in the specification but is not mentioned in the drawings. The applicants respectfully note that Figure 35 was filed with the original application as sheet 31 of 36. The postcard and filing receipt indicated that all 36 sheets of drawings were received. In any event, to expedite the prosecution of this application, a copy of Figure 35, as filed, is submitted herewith.

Figure 36 is objected to since the Examiner contends that it is the same as Figure 2B of U.S. Patent Application Serial No. 6,765,866 (“the Wyatt patent”) and

should be labeled as “Prior Art”. Upon inspecting Figure 2B of the Wyatt patent, the applicants cannot see how the Examiner finds Figure 36 of the present application to be the same as Figure 2B of the Wyatt patent, and respectfully request that the Examiner verify/clarify his position.

Claims 5-8, 11-18, 20, 22-24, 28-30 and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. Since, however, the independent claims 1 and 27 are believed to be allowable for at least the reasons discussed below, the applicants have not rewritten some of these claims at this time, but have amended independent claims 21 and 31 to include features found to be allowable.

Rejections under 35 U.S.C. § 102

Claims 1, 2, 4, 19, 21, 25-27, 38, 39 and 43 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,556,541 (“the Bare patent”). The applicants respectfully request that the Examiner reconsider and withdraw this ground of rejection in view of the following.

Before discussing various patentable features of the independent claims, the applicants first introduce the Bare patent. The Bare patent concerns networking protocols for load balancing and MAC address learning and dissemination.

On the one hand, the Bare patent addresses short-comings of the spanning tree networking protocol; namely, its inability to (i) maximize available bandwidth (See, e.g., column 5, lines 11 and 12.), and (ii) balance communications loads among redundant paths between switches (See, e.g., column 5, lines 35-52.). This is because the spanning tree protocol disables redundant links between switches to prevent loops and “broadcast storms” that might otherwise occur when network information is multicast. (See, e.g., column 4, lines 25-63.)

On the other hand, the Bare patent supports the dissemination of MAC addresses. It does so by (i) generating a MAC address information packet (See, e.g., Figure 22.) when a switch (which is part of a “load balance domain”) receives a

message from a network device, (ii) transmitting a copy of the MAC address information packet to all other ports of the switch which attach to other switches (which are part of the load balance domain), and (iii) propagating the MAC address information packets to other switches using a “pruned broadcast tree”. (See, e.g., column 6, lines 33-55.)

Claims 21-24

Since claim 21 has been rewritten to include, in the alternative, features of claims 22, 23, 24, each of which was found to include allowable subject matter, the rejection with respect to claim 21 is rendered moot. Since claim 25 depends from amended claim 21 and since claim 26 depends from claim 25, the rejection is also rendered moot with respect to these claims.

Claims 38 and 43

Finally, since claims 38 and 43 have been canceled, the rejection is rendered moot with respect to these claims.

Claims 1-4, 19, 27 and 39

Independent claims 1, 27 and 39 are not anticipated by the Bare patent because the Bare patent does not teach the novel combination recited in these claims. First, with respect to claim 1, the Examiner contends that the claimed physical interface is taught by both a “network manager” and a “trunk port”. (See Paper No. 02042005, page 4.) However, as recited in the claims, the physical interface is a single physical interface (“the” is used to refer to the antecedent physical interface), not two separate and distinct elements. Thus, the Examiner’s rejection of claims 1 and 39 is improper for at least this first reason. Since claims 2-4 and 19 each depend from claim 1, they are similarly allowable.

Further, with respect to claims 1, 27 and 39 the Examiner contends that the “add packet” discussed from column 49, line 65 through column 50, line 4 of the Bare patent teaches the claimed act of, or means for, adding customer context

information to resulting data (i.e., data received from a first customer device, via access facilities, addressed to a second customer device, from which at least a part of layer 2 address information has been removed) to generate modified data. (See, e.g., Paper No. 02042005, pages 4 and 8.) However, the section of the Bare patent cited by the Examiner concerns removing a broadcast path (See, e.g., heading at line 11 of column 49.) which may occur when a switch needs to inform an adjacent switch that the broadcast path it was using is going away, or is requesting that an adjacent switch not send it broadcasts (See, e.g., column 49, lines 27-31.) Furthermore, all of this is in the context of setting up and maintaining switch broadcast paths (See, e.g., the heading at line 17 of column 45.) -- namely a pruned broadcast tree. Consequently, such packets are not generated upon receiving data received from a first customer device, via access facilities, addressed to a second customer device as recited in the claimed invention. Accordingly, the Examiner's rejection of claims 1, 27 and 39 is improper for at least this additional reason. Since claims 2-4 and 19 each depend from claim 1, they are similarly allowable.

Claims 1, 9, 10 and 19 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,826,195 ("the Nikolich patent"). The applicants respectfully request that the Examiner reconsider and withdraw this ground of rejection in view of the following.

Before discussing various patentable features of the independent claims, the applicants first introduce the Nikolich patent. The Nikolich patent concerns a network switch having a chassis 200 which integrates a plurality of network interfaces and applications. (See, e.g., column 3, lines 23-30.) As shown in Figure 5, the chassis 200 is to be provided as a part of a cable headend station or a regional hub 262.

Figure 11 illustrates the connection of application modules 422 to a backplane 420 of the chassis 200 via mesh communication chips (MCCs) 424. (See, e.g., column 4, lines 57-61.) The main parts of columns 5 and 6 concern inter-chassis switching. For the purpose of such inter-chassis switching, a BAS header (See, e.g., Figure 13.) may be used. Figure 14 shows an inter-chassis link.

The Examiner contends that element 558 of Figure 14, which is a processor of an IP access switch of a cable headend or regional hub, teaches the claimed first customer device, and that element 572 of Figure 14, which is a port of an IP access switch of a cable headend or regional hub, teaches the claimed second customer device. (See Paper No. 02042005, page 9.) Clearly, these intra-switch elements cannot be characterized as customer devices. Thus, claim 1 is not anticipated by the Nikolich patent for at least this reason. (New claims 44 and 45 depend from claim 1 and further cite that the first customer device has a layer 2 address and a layer 3 address, respectively, to make it more clear that element 558 of the Nikolich patent cannot be characterized as a first customer device.) Since claims 9, 10 and 19 each depend from claim 1, they are similarly not anticipated by the Nikolich patent.

Further, claim 1 recites that a physical interface is terminated by a link of access facilities, that at least one logical interface is associated with this physical interface, and that customer context information is associated with the logical interface. The Examiner contends that (i) buses 554, 556 and 560 teach the claimed access facilities, and (ii) the MCC teaches the claimed physical interface. (See Paper No. 02042005, page 9.) However, even assuming, arguendo, that the Examiner's characterization is proper, the MCC does not terminate the buses 554, 556 and 560. Further, the Examiner contends that both the MCC and a stack/entity teach the same physical interface. (See, Paper No. 02042005, page 9.) Thus, the Examiner's rejection includes inherent inconsistencies. According, claim 1 is not anticipated by the Nikolich patent for at this these additional reasons. Since claims 9, 10 and 19 each depend from claim 1, they are similarly not anticipated by the Nikolich patent.

Claims 31-33, 35 and 37 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,850,531 ("the Rao patent"). The applicants respectfully request that the Examiner reconsider and withdraw this ground of rejection in view of the following.

Since claim 31 has been rewritten to include the features of allowable claim 34 and intervening claim 33, the rejection is rendered moot with respect to claim 31. Since claims 32, 35 (as amended) and 37 depend from rewritten claim 31, and since

claim 36 depends from claim 35, the rejection is also rendered moot with respect to these claims.

Rejections under 35 U.S.C. § 103

Claim 3 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the Bare patent. The applicants respectfully request that the Examiner reconsider and withdraw this ground of rejection in view of the following.

The Examiner concedes that the Bare patent does not teach aggregating modified data with other modified data. To compensate for this admitted deficiency in the Bare patent, the Examiner concludes that it would have been obvious to aggregate the modified data with other modified data because the data is broadcast to other switches via a communication link. (See Paper No. 02042005, page 12.) This rejection is improper for at least two reasons.

First, the applicants respectfully submit that the fact the data from different customer devices may be broadcast to other switches would not have led one skilled in the art to conclude that such data should be aggregated on a link. More specifically, the broadcasting in the Bare patent is used to disseminate information about the MAC address of a new network device. Since new devices may often come onto the network at different times, one skilled in the art would have broadcast a MAC information packet at the time a new device came onto the network, and would not have waited for other new devices to come onto the network. Accordingly, claim 3 is not rendered obvious by the Bare patent for at least this reason.

Second, even assuming, arguendo, that one skilled in the art would have been motivated to modify the Bare patent as proposed by the Examiner, it still would still be deficient with respect to claim 1 for the reasons discussed above. Accordingly, claim 3, which depends from claim 1, is not rendered obvious by the Bare patent for at least this additional reason.

Claim 36 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the Rao patent in view of U.S. Patent No. 6,751,220 (“the Li patent”). The applicants

respectfully request that the Examiner reconsider and withdraw this ground of rejection in view of the following.

Since claim 36 depends, indirectly, from claim 31 which has been amended to include the allowable subject matter of claim 34 and intervening claim 33, it is now in condition for allowance.

New claims

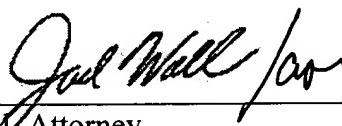
New claims 44 and 45 depend from claim 1 and further distinguish the claimed invention over the cited art.

Conclusion

In view of the foregoing amendments and remarks, the applicant respectfully submits that the pending claims are in condition for allowance. Accordingly, the applicants request that the Examiner pass this application to issue. To the extent necessary, a petition for extension of time under 37 C.F.R. § 1.136 is hereby made, the fee for which should be charged against Patent Office deposit account 07-2347. Please charge any other fees due or credit any overpayment to that account.

Respectfully submitted,

June 22, 2005



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Amendment Transmittal

I hereby certify that this correspondence is, on the date shown below, being sent via first class mail postage prepaid to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Christian Andersen

Type or print name of person signing certification



Signature

June 22, 2005

Date